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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FOLEY & LARDNER 777 EAST WISCONSIN AVENUE SUITE 3800 MILWAUKEE, WI 53202-5308			NGUYEN, CHANH DUY	
			ART UNIT	PAPER NUMBER
			2675	11

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,149

Applicant(s)

GETTEMY ET AL.

Examiner

Chanh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on February 19, 2004 has been entered and considered by examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 18 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Lichtfuss (U.S. Patent No. 2002/0180709 A1).

As to claim 18, Lichtfuss discloses a handheld computer including a housing (112), an expandable display assembly (110) supported on the housing (100),

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providing a viewing area when the expandable display assembly is folded (i.e. display area 110 is in position wrapping around housing 112). Lichtfuss teaches the expandable display assembly (110) providing a larger viewing area when expandable display assembly is expanded (unfolded or unwrapped around position as shown in Figure 1). Lichtfuss teaches a touch sensor (160) associated with the expanded display, the touch sensor (160) being enlarged when the display (110) is expanded (see section 0032).

Lichtfuss teaches that the display (110) can be bent down in a way that the upper area (118) of the display (110) is exposed to a viewer to view the image (see Figure 2). Furthermore, Lichtfuss teaches the display (110) being wrapped around the housing (112). Thus, the display (110) can be bent down and wrapped around the housing (112) in the way that the display (110) is exposed to a viewer to view the image. This reads on the limitation "wherein a user may view images on the viewing area when the display assembly is folded and when assembly is expanded"

As to claims 20-21, Lichtfuss clearly teaches the expandable display (110) being foldable and a handheld computer; see sections 0006-0008.

4. Claims 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Katsura (U.S. Patent No. 6,377,324).

As to claim 18, Katsura discloses a method for using a handheld computer including viewing an image on an unenlarged viewing area (an area on a housing 1) of a flexible display (4) (e.g., a user bends a housing 2 is in positioned 45° - 60° respect to a

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housing 1). The claimed "viewing an image on an unenlarged viewing area" is so broad that it can read on a user viewing only the image on the housing (1) if the housing (2) is in bending positioned 45° - 60° respect to a housing 1. The claim does not require a viewing area can be viewed by an operator or user or viewer when it is folded. Katsura teaches providing input to the handheld computer via touch sensor (see column 5, lines 13-16) having a unenlarged sensing area (i.e. display area in housing 1) associated with the flexible display (4). Katsura teaches enlarging the flexible display (4) to provide an enlarged viewing area (i.e. the housing 2 is wide open as shown in Figures 1 and 7). Katsura clearly teaches viewing an image in the enlarged viewing area and providing input to the handheld computer via touch sensor (see column 5, lines 13-16) having a enlarged sensing area (i.e. area in both housings 1-2 as wide opening shown in figures 1 and 7) associated with the flexible display (4).

As to claim 25, since the flexible display (4) of Katsura mounted to the handheld computer (1 and 2) (see column 5, lines 11-13), it is clear that the flexible display (4) can be decoupled from the handheld computer (1-2) as broad claimed language.

As to claims 26 and 27, Katsura teaches the flexible display (4) having a touch sensitive input operating part through which data can be entered by touching (see column 5, lines 12-20). Thus, it is inherent that the touch by a user can be performed by a fingertip or stylus.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Bodony et al (U.S. Patent No. 6,307,751) in view of Gamsaragan et al (U.S. 2002/0140,690 A1).

As to claim 1, Bodony discloses a display system (100) , detachable form a host device (713) (see Figure 7 and Figure 19A) including a power source (712), a processor (702) coupled to the power source (712), a memory (708) coupled to the power source (712) and the processor (702). Bodony teaches a flexible electronic display (706) coupled to the processor (702) and the power source (712), a coupler (714) for coupling the flexible electronic display (706) to the host device (713). Bodony teaches a flexible

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touch screen sensor (touch screen; see column 7, lines 63-66) movable with the flexible electronic display (see column 12, lines 54-64 and column 13, lines 16-25). Bodony teaches a transceiver (714) coupled to the processor (702). The only thing different from Bodony and the claim is that Bodony does not mention "the transceiver receives information from the host device when the display is decoupled from coupler, and images are provided on the display based on the information". However, using wireless transceiver to communicate between two devices is well-known in the art. For example, in same field of endeavor with Bodony, Gamsaragan teaches using a radio link established between transceiver (22) on the base station (12) and transceiver (24) on the computing display subsystem (14) (see sections 0016 and 0021). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used transceiver as taught by Gamsaragan to the display system of Bodony so that the data information can be transferred from base station or host to the portable computer when a user is traveling from his/her regular workplace without sacrificing substantial computing power (see sections 0004-0006 of Gamsaragan).

As to claim 4, Bodony clearly teaches the host device being a handheld device (see column 9, lines 18-28).

8. Claims 3, 7, 9-10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodony in view of Lichtfuss (U.S. 2002/0180709 A1).

As to claim 13, note the discussion of Bodony above, Bodony teaches the display assembly as recited in claim 13 with exception of describing the limitation "a foldable"

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and “the transceiver receives information from the host device when the display is decoupled from coupler, and images are provided on the display based on the information”. For example, Bodony teaches a display assembly including a power source (712) , a processor (702) coupled to the power source (712), a memory (708) coupled to the power source (712) and the processor (702). Bodony teaches electronic display (706) coupled to the processor (702) and the power source (712), a coupler (714) for coupling the electronic display (706) to the host device (713). Bodony teaches a transceiver (714) coupled to the processor (702). Lichtfuss teaches a touch sensor (160) associated with the foldable display (110), the touch sensor (160) being foldable with the foldable display electronic display (110) (see section 0025).

Lichtfuss teaches that “communication means such as infrared and radio frequency can be added to the handle 112 of the viewing device 100 to enable viewing device 100 to communicate with a peripheral device....in addition, image data may be downloaded to the viewing device 100 from a computer or digital image device via the communication means” (see section 0038). This reads on the limitation “the transceiver receives information from the host device when the display is decoupled from coupler, and images are provided on the display based on the information”.

Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the flexible of liquid crystal display panel as taught by Lichtfuss to the flexible display panel of Bodony so as to prevent the bend in the flexible liquid crystal display panel from damage and degradation even it drops to the floor (see section 007 of Lichtfuss).

As to claim 7, this claim is broader than claim 13 since it does not recite the limitation "transceiver" as claim 13. Adding the limitation "the flexible display system assembly having a first viewing area that are viewable by a user...., at least when decoupled from coupler" is clearly taught by Lichtfuss as previously discussed with respect to claim 13 above.

As to claims 3 and 9-10, Lichtfuss clearly teaches the flexible display being foldable (i.e. wrap around); see section 0025.

As to claim 15, Bodony clearly teaches a coupler (714) coupled to a handheld computer (713).

9. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodony in view of Gamsaragan, as applied to claim 1, and further in view of Comiskey et al (U.S. Application Publication 2003/0067427).

As to claim 2, note the discussion of Bodony and Gamsaragan above, Bodony and Gamsaragan do not mention the flexible electronic display being an electronic paper. Comiskey teaches that "the flexible display can be used as an electronic paper" (see page 8, paragraph 0095). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the electronic paper as taught by Comiskey to the display panel of Bodony as modified by Gamsaragan because the electronic paper can be used anywhere paper is used today but offers the ability to be updated via stylus (see page 8, paragraph 0095 of Comiskey).

As to claim 5, Comiskey clearly teaches touch sensor including a transparent coating (see page 4, paragraph 0060).

10. Claims 8, 11, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodony in view of Lichtfuss as applied to claims 7 and 13 above, and further in view of Comiskey.

As to claims 8 and 14, note the discussion of Bodony and Lichtfuss above, Bodony and Lichtfuss do not mention the flexible electronic display being an electronic paper. Comiskey teaches that "the flexible display can be used as an electronic paper" (see page 8, paragraph 0095). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used the electronic paper as taught by Comiskey to the display panel of Bodony as modified by Lichtfuss because the electronic paper can be used anywhere paper is used today but offers the ability to be updated via stylus (see page 8, paragraph 0095 of Comiskey).

As to claims 11-16, Comiskey clearly teaches touch sensor including a transparent coating (see page 4, paragraph 0060).

11. Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lichtfuss in view of Comiskey.

As to claim 19, note the discussion of Lichtfuss above, Lichtfuss does not mention the flexible electronic display being an electronic paper. Comiskey teaches that "the flexible display can be used as an electronic paper" (see page 8, paragraph 0095). Therefore, it would have been obvious to one of ordinary skill in the art at the

invention was made to have used the electronic paper as taught by Comiskey to the display panel of Lichtfuss because the electronic paper can be used anywhere paper is used today but offers the ability to be updated via stylus (see page 8, paragraph 0095 of Comiskey).

As to claim 22, Comiskey clearly teaches touch sensor including a transparent coating (see page 4, paragraph 0060).

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bodony in view Gamsaragan, as applied to claim 1, and further in view of Charlier et al ((U.S. Application Publication 2003/0064751).

As to claim 6, note the discussion of Bodony and Gamsaragan above, Bodony and Gamsaragan donot mention an electrotexile. Charlier teaches the use of well-known electrotexile material into the user interface (such as touch pad, key pad); see page 2, paragraph 0029. Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used electrotexile material as taught by Charlier to the touch pad of Bodony as modified by Gamsaragan because the electrotexile sensor can be folded without damage of the sensor.

13. Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodony in view of Litchfuss as applied to claims 7 and 13 above, and further in view of Charlier.

As to claims 12 and 17, note the discussion of Bodony and Litchfuss above, Bodony and Litchfuss do not mention an electrotexile. Charlier teaches the use of well-known electrotexile material into the user interface (such as touch pad, key pad); see page 2, paragraph 0029. Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used electrotexile material as taught by Charlier to the touch pad of Bodony as modified by Litchfuss because the electrotexile sensor can be folded without damage of the sensor.

14. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Litchfuss in view Charlier.

As to claim 23, note the discussion of Litchfuss above, Litchfuss does not mention an electrotexile. Charlier teaches the use of well-known electrotexile material into the user interface (such as touch pad, key pad); see page 2, paragraph 0029. Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used electrotexile material as taught by Charlier to the touch pad of Litchfuss because the electrotexile sensor can be folded without damage of the sensor.

Response to Arguments

15. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

In view of amendment to claims 1, 7, 13 and 18, the references Lichtfuss and Gamsaragan have been added for new ground of rejection. As to claim 24, applicant argues that Katsura does not discloses, teach or suggest viewing an image on an

unenlarged viewing area of flexible display and then also viewing an image in the enlarged viewing area of the flexible display. However, the claim is so broad that it can read on it can read on a user viewing only the image on the housing (1) if the housing (2) is in bending positioned 45° - 60° respect to a housing 1 (i.e. viewing an image on an unenlarged viewing area. The claim does not require a viewing area can be viewed by an viewer when it is folded. When the housing (2) is wide open as shown in Figure 1 and 7, then it reads on the limitation "viewing an image in the enlarged viewing area" because a viewer now can see an image displayed on whole flexible display (4) in both housing (1 and 2).

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, D.C. 20231

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


C. Nguyen
April 27, 2004


CHANH NGUYEN
PRIMARY EXAMINER